

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS

Claims 1-24 (canceled)

25. (New) A method for creating a semiconductor device, said method including:

forming a base layer on a semiconductor layer, said base layer having different electrical properties from said semiconductor layer;

forming a dielectric layer on said base layer, said base layer having different electrical properties from said dielectric layer;

establishing an opening in said base layer and an opening in said dielectric layer to expose said semiconductor layer,

wherein the lateral extent of said opening in said base layer is greater than the lateral extent of said opening in said dielectric layer; and

positioning a conductive contact in said opening in said base layer and said opening in said dielectric layer, said conductive contact forming a contact between said conductive contact and said semiconductor layer,

wherein the lateral extent of said contact is less than the lateral extent of said opening in said base layer.

26. (New) The method of claim 25, wherein said base layer has a different chemical composition than said dielectric layer and said semiconductor layer.

27. (New) The method of claim 25, wherein said base layer may be selectively etched relative to said dielectric layer.

28. (New) The method of claim 25, wherein said base layer may be selectively etched relative to said semiconductor layer.

29. (New) The method of claim 25, wherein said step of establishing said opening in said base layer occurs by laterally etching said base layer relative to the surface of said semiconductor layer.

30. (New) The method of claim 25, wherein said semiconductor layer includes a depletion region when a voltage bias is applied to said semiconductor device,
wherein the lateral extent of said opening in said base layer is at least as large as the lateral extent of said depletion region.

31. (New) A method for reducing reverse leakage current in a semiconductor device, said method including:

establishing a semiconductor structure including a semiconductor substrate, a first layer on top of said substrate and a second layer on top of said first layer;

establishing a first layer opening in said first layer;

establishing a second layer opening in said second layer,

wherein said first layer has different electrical properties than said second layer and said semiconductor layer,

wherein the area of said second layer opening overlaps at least a portion of the area of said first layer opening to expose said semiconductor layer; and

positioning a conductive contact in contact with said semiconductor layer and situated in said first layer opening and said second layer opening,

wherein said conductive contact does not contact said first layer.

32. (New) The method of claim 31, wherein said first layer has a different chemical composition than said second layer.

33. (New) The method of claim 31, wherein said first layer may be selectively etched relative to said second layer.